

IN THE CLAIMS:

Please cancel claims 1-14 and 22-29 without prejudice.

Please amend claim 15 as follows:

Q3 15. (Amended) Isolated nucleic acid encoding Apo-2DcR polypeptide comprising amino acid residues 30 to 161, 1 to 161, 1 to 236, or 1 to 259 of Figure 1A (SEQ ID NO:1).

16. (As filed) The nucleic acid of claim 15 wherein said nucleic acid encodes native sequence Apo-2DcR polypeptide comprising amino acid residues 1 to 259 of Fig. 1A (SEQ ID NO:1).

17. (As filed) The nucleic acid of claim 15 comprising nucleotides 193 to 969 of Fig. 1A (SEQ ID NO:2).

18. (As filed) A vector comprising the nucleic acid of claim 15.

19. (As filed) The vector of claim 18 operably linked to control sequences recognized by a host cell transformed with the vector.

20. (As filed) A host cell comprising the vector of claim 18.

21. (As filed) A process of using a nucleic acid molecule encoding Apo-2DcR polypeptide to effect production of Apo-2DcR polypeptide comprising the host cell of claim 20.

Please add the following claims:

a4 ---30. An isolated nucleic acid molecule comprising a first

polynucleotide sequence 95% or more identical to a second polynucleotide sequence selected from the group consisting of:

(a) a polynucleotide sequence encoding amino acids 1 to 259 of SEQ ID NO:1;

24 (b) a polynucleotide sequence encoding amino acids 30 to 259 of SEQ ID NO:1 and

(c) a polynucleotide sequence complementary to any of the polynucleotide sequences in (a) or (b).

31. The isolated nucleic acid molecule of claim 30 wherein said second polynucleotide sequence is (a).

32. The isolated nucleic acid molecule of claim 30 which comprises polynucleotide sequence (a).

33. The isolated nucleic acid molecule of claim 30 wherein said polynucleotide comprises a heterologous polynucleotide sequence encoding a Fc polypeptide.

34. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 30 into a vector.

35. A recombinant vector comprising the isolated nucleic acid molecule of claim 30.

36. The recombinant vector of claim 35 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

37. A recombinant host cell comprising the isolated nucleic acid molecule of claim 30.

38. The recombinant host cell of claim 37 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

39. A method for producing a polypeptide, comprising:

- (a) culturing a host cell comprising the vector of claim 35 under conditions suitable to produce the polypeptide encoded by said nucleic acid; and
- (b) recovering said polypeptide.

40. An isolated nucleic acid molecule comprising a first polynucleotide sequence 95% or more identical to a second polynucleotide sequence selected from the group consisting of:

- (a) a polynucleotide sequence encoding an Apo-2DcR polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209087;
- (b) a polynucleotide sequence encoding the mature Apo-2DcR polypeptide encoded by the cDNA clone contained in ATCC Deposit No. 209087; and
- (c) a polynucleotide sequence complementary to any of the polynucleotide sequences in (a) or (b) above.

41. The isolated nucleic acid molecule of claim 40 wherein said second polynucleotide sequence is (a).

42. The isolated nucleic acid molecule of claim 40 which comprises polynucleotide sequence (a).

43. The isolated nucleic acid molecule of claim 40 wherein said second polynucleotide sequence is (b).

44. The isolated nucleic acid molecule of claim 40 which comprises polynucleotide sequence (b).

45. The isolated nucleic acid molecule of claim 40 wherein said second polynucleotide sequence is (c).

46. The isolated nucleic acid molecule of claim 40 which comprises polynucleotide sequence (c).

47. The isolated nucleic acid molecule of claim 40 wherein said nucleic acid molecule comprises a heterologous polynucleotide sequence.

48. The isolated nucleic acid molecule of claim 47 wherein said heterologous polynucleotide sequence encodes a polypeptide.

49. The isolated nucleic acid molecule of claim 48 wherein said heterologous polynucleotide sequence encodes a Fc polypeptide.

24 50. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 40 into a vector.

51. A recombinant vector comprising the isolated nucleic acid molecule of claim 40.

52. The recombinant vector of claim 51 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

53. A recombinant host cell comprising the isolated nucleic acid molecule of claim 40.

54. The recombinant host cell of claim 53 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

55. The isolated nucleic acid of claim 40, wherein said second polynucleotide sequence is selected from the group consisting of (a) and (b), and wherein said first polynucleotide sequence encodes a polypeptide.

56. A method for producing a polypeptide, comprising:

- (a) culturing a host cell comprising the vector of claim 51 under conditions suitable to produce the polypeptide encoded by said nucleic acid; and
- (b) recovering said polypeptide.

57. An isolated nucleic acid molecule comprising a first polynucleotide sequence 95% or more identical to a second polynucleotide sequence selected from the group consisting of:

(a) a polynucleotide sequence encoding a polypeptide comprising the amino acid sequence of residues m to 259 of SEQ ID NO:1, where m is an integer in the range of 1 to 53;

(b) a polynucleotide sequence encoding a polypeptide comprising the amino acid sequence of residues 1 to x of SEQ ID NO:1, where x is an integer in the range of 149 to 259; and

(c) a polynucleotide sequence encoding a polypeptide having the amino acid sequence consisting of residues m to x of SEQ ID NO:1, m and x are defined in (a) and (b) above;

wherein percentage identity is determined using computer software with parameters that calculate identity over the full length of the second polynucleotide sequence.

58. The isolated nucleic acid molecule of claim 57 wherein said second polynucleotide sequence is (a).

59. The isolated nucleic acid molecule of claim 57 which comprises polynucleotide sequence (a).

60. The isolated nucleic acid molecule of claim 59 which comprises a polynucleotide sequence encoding amino acids 30 to 259 of SEQ ID NO:1.

61. The isolated nucleic acid molecule of claim 57 wherein said second polynucleotide sequence is (b).

62. The isolated nucleic acid molecule of claim 57 which comprises polynucleotide sequence (b).

63. The isolated nucleic acid molecule of claim 57 wherein said second polynucleotide sequence is (c).

64. The isolated nucleic acid molecule of claim 57 which comprises polynucleotide sequence (c).

65. The isolated nucleic acid molecule of claim 57 wherein said nucleic acid molecule comprises a heterologous polynucleotide sequence.

66. The isolated nucleic acid molecule of claim 65 wherein said heterologous polynucleotide sequence encodes a polypeptide.

67. The isolated nucleic acid molecule of claim 66 wherein said heterologous polynucleotide sequence encodes a Fc polypeptide.

68. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 57 into a vector.

69. A recombinant vector comprising the isolated nucleic acid molecule of claim 57.

70. The recombinant vector of claim 69 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

71. A recombinant host cell comprising the isolated nucleic acid molecule of claim 57.

72. The recombinant host cell of claim 71 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

73. A method for producing a polypeptide, comprising:  
(a) culturing a host cell comprising the nucleic acid molecule of claim 57 under conditions suitable to produce the polypeptide encoded by said nucleic acid; and (b) recovering said polypeptide.

74. An isolated nucleic acid encoding a polypeptide comprising 30 contiguous amino acids from amino acids 27 to 259 of SEQ ID NO:1.

75. The isolated nucleic acid of claim 74 which encodes a polypeptide comprising amino acids 30 to 259 of SEQ ID NO:1.

76. An isolated nucleic acid comprising a first polynucleotide sequence 90% or more identical to a second polynucleotide sequence selected from the group consisting of:  
(a) a polynucleotide sequence encoding amino acids 1 to 259 of SEQ ID NO:1;

(b) a polynucleotide sequence encoding amino acids 30 to 259 SEQ ID NO:1; and

(c) a polynucleotide sequence complementary to any of the polynucleotide sequences in (a) or (b);

wherein percentage identity is determined using computer software with parameters that calculate identity over the full length of the second polynucleotide sequence and that allows gaps of up to 10% of the total number of nucleotides of said nucleotide sequence.

77. The isolated nucleic acid molecule of claim 76 wherein said second polynucleotide sequence is (a).

78. The isolated nucleic acid molecule of claim 76 which comprises polynucleotide sequence (a).

79. The isolated nucleic acid molecule of claim 76 wherein said nucleic acid molecule comprises a heterologous polynucleotide sequence.

80. The isolated nucleic acid molecule of claim 79 wherein said heterologous polynucleotide sequence encodes a polypeptide.

81. The isolated nucleic acid molecule of claim 80 wherein said heterologous polynucleotide sequence encodes a Fc polypeptide.

82. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 76 into a vector.

83. A recombinant vector comprising the isolated nucleic acid molecule of claim 76.

84. The recombinant vector of claim 83 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

85. A recombinant host cell comprising the isolated nucleic acid molecule of claim 76.

86. The recombinant host cell of claim 85 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

87. A method for producing a polypeptide, comprising:

(a) culturing a host cell comprising the vector of claim 83 under conditions suitable to produce the polypeptide encoded by said nucleic acid; and



(b) recovering said polypeptide.

88. An isolated nucleic acid molecule comprising a first polynucleotide sequence 90% or more identical to a second polynucleotide sequence selected from the group consisting of:

(a) a polynucleotide sequence encoding an Apo-2DcR polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209087;

(b) a polynucleotide sequence encoding the mature Apo-2DcR polypeptide encoded by the cDNA clone contained in ATCC Deposit No. 209087; and

(c) a polynucleotide sequence complementary to any of the polynucleotide sequences in (a) or (b) above;

wherein percentage identity is determined using computer software with parameters that calculate identity over the full length of the second polynucleotide sequence and that allows gaps of up to 10% of the total number of nucleotides of said nucleotide sequence.

89. The isolated nucleic acid molecule of claim 88 wherein said second polynucleotide sequence is (a).

90. The isolated nucleic acid molecule of claim 88 which comprises polynucleotide sequence (a).

91. The isolated nucleic acid molecule of claim 88 wherein said second polynucleotide sequence is (b).

92. The isolated nucleic acid molecule of claim 88 which comprises polynucleotide sequence (b).

93. The isolated nucleic acid molecule of claim 88 wherein said second polynucleotide sequence is (c).

94. The isolated nucleic acid molecule of claim 88 which comprises polynucleotide sequence (c).

95. The isolated nucleic acid molecule of claim 88 wherein said nucleic acid molecule comprises a heterologous polynucleotide sequence.

96. The isolated nucleic acid molecule of claim 95 wherein said heterologous polynucleotide sequence encodes a polypeptide.

97. The isolated nucleic acid molecule of claim 96 wherein said heterologous polynucleotide sequence encodes a Fc polypeptide.

98. A method for making a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 88 into a vector.

99. A recombinant vector comprising the isolated nucleic acid molecule of claim 88.

100. The recombinant vector of claim 99 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

101. A recombinant host cell comprising the isolated nucleic acid molecule of claim 88.

102. The recombinant host cell of claim 101 wherein said nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

103. The isolated nucleic acid molecule of claim 88 wherein said second polynucleotide sequence is selected from the group consisting of (a) and (b), and wherein said first polynucleotide sequence encodes a polypeptide.

104. A method for producing a polypeptide, comprising:

(a) culturing a host cell comprising the vector of claim 99 under conditions suitable to produce the polypeptide encoded by said nucleic acid; and

(b) recovering said polypeptide.

105. Isolated nucleic acid encoding Apo-2DcR polypeptide, wherein said Apo-2DcR polypeptide has at least 80% identity to the sequence of amino acid residues 1 to 259 of Fig. 1A (SEQ ID NO:1) and said Apo-2DcR polypeptide binds Apo-2 ligand.

106. The nucleic acid of claim 105 wherein said Apo-2DcR polypeptide has at least 90% identity to the sequence of amino acid residues 1 to 259 of Fig. 1A (SEQ ID NO:1).

107. The nucleic acid of claim 106 wherein said Apo-2DcR polypeptide has at least 95% identity to the sequence of amino acid residues 1 to 259 of Fig. 1A (SEQ ID NO:1).

108. A vector comprising the nucleic acid of claim 105.

109. The vector of claim 108 operably linked to control sequences recognized by a host cell transformed with the vector.

110. A host cell comprising the vector of claim 108.

111. A process of using a nucleic acid molecule encoding Apo-2DcR polypeptide to effect production of Apo-2DcR polypeptide comprising the host cell of claim 110.

112. Isolated nucleic acid encoding Apo-2DcR polypeptide, wherein said Apo-2DcR polypeptide (a) is a fragment of the sequence of amino acid residues 1 to 259 of Fig. 1A (SEQ ID NO:1), (b) lacks a transmembrane domain, and (c) binds Apo-2 ligand. ---